



RECEIVED

MAY 29 2003

227274078b.ST25.txt
SEQUENCE LISTING

TECH CENTER 1600/2900

<110> Lang, Jas C.
<120> Detecting the Expression of the DESC1 Gene in Squamous Cell Carcinoma
<130> 22727/04078
<140> 09/674,035
<141> 2000-12-11
<150> PCT/IB99/01818
<151> 1999-11-11
<160> 13
<170> PatentIn version 3.1
<210> 1
<211> 1471
<212> DNA
<213> Homo sapiens
<220>
<221> CDS
<222> (56)..(1324)
<223>

<400> 1
tgacttggat gtagacctcg accttcacag gactcttcat tgctggttgg caatg atg 58
Met
1
tat cgg cca gat gtg gtg agg gct agg aaa aga gtt tgt tgg gaa ccc 106
Tyr Arg Pro Asp Val Val Arg Ala Arg Lys Arg Val Cys Trp Glu Pro
5 10 15
tgg gtt atc ggc ctc gtc atc ttc ata tcc ctg att gtc ctg gca gtg 154
Trp Val Ile Gly Leu Val Ile Phe Ile Ser Leu Ile Val Leu Ala Val
20 25 30
tgc att gga ctc act gtt cat tat gtg aga tat aat caa aag aag acc 202
Cys Ile Gly Leu Thr Val His Tyr Val Arg Tyr Asn Gln Lys Lys Thr
35 40 45
tac aat tac tat agc aca ttg tca ttt aca act gac aaa cta tat gct 250
Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr Thr Asp Lys Leu Tyr Ala
50 55 60 65
gag ttt ggc aga gag gct tct aac aat ttt aca gaa atg agc cag aga 298
Glu Phe Gly Arg Glu Ala Ser Asn Asn Phe Thr Glu Met Ser Gln Arg
70 75 80
ctt gaa tca atg gtg aaa aat gca ttt tat aaa tct cca tta agg gaa 346
Leu Glu Ser Met Val Lys Asn Ala Phe Tyr Lys Ser Pro Leu Arg Glu
85 90 95
gaa ttt gtc aag tct cag gtt atc aag ttc agt caa cag aag cat gga 394
Glu Phe Val Lys Ser Gln Val Ile Lys Phe Ser Gln Gln Lys His Gly
100 105 110
gtg ttg gct cat atg ctg ttg att tgt aga ttt cac tct act gag gat 442
Val Leu Ala His Met Leu Leu Ile Cys Arg Phe His Ser Thr Glu Asp

227274078b.ST25.txt

115	120	125	
cct gaa act gta gat aaa att gtt caa ctt gtt tta cat gaa aag ctg Pro Glu Thr Val Asp Lys Ile Val Gln Leu Val Leu His Glu Lys Leu 130 135 140 145			490
caa gat gct gta gga ccc cct aaa gta gat cct cac tca gtt aaa att Gln Asp Ala Val Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile 150 155 160			538
aaa aaa atc aac aag aca gaa aca gac agc tat cta aac cat tgc tgc Lys Lys Ile Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys Cys 165 170 175			586
gga aca cga aga agt aaa act cta ggt cag agt ctc agg atc gtt ggt Gly Thr Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val Gly 180 185 190			634
ggg aca gaa gta gaa gag ggt gaa tgg ccc tgg cag gct agc ctg cag Gly Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu Gln 195 200 205			682
tgg gat ggg agt cat cgc tgt gga gca acc tta att aat gcc aca tgg Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr Trp 210 215 220 225			730
ctt gtg agt gct gct cac tgt ttt aca aca tat aag aac cct gcc aga Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro Ala Arg 230 235 240			778
tgg act gct tcc ttt gga gta aca ata aaa cct tcg aaa atg aaa cgg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys Met Lys Arg 245 250 255			826
ggt ctc cgg aga ata att gtc cat gaa aaa tac aaa cac cca tca cat Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys His Pro Ser His 260 265 270			874
gac tat gat att tct ctt gca gag ctt tct agc cct gtt ccc tac aca Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser Pro Val Pro Tyr Thr 275 280 285			922
aat gca gta cat aga gtt tgt ctc cct gat gca tcc tat gag ttt caa Asn Ala Val His Arg Val Cys Leu Pro Asp Ala Ser Tyr Glu Phe Gln 290 295 300 305			970
cca ggt gat gtg atg ttt gtg aca gga ttt gga gca ctg aaa aat gat Pro Gly Asp Val Met Phe Val Thr Gly Phe Gly Ala Leu Lys Asn Asp 310 315 320			1018
ggt tac agt caa aat cat ctt cga caa gca cag gtg act ctc ata gac Gly Tyr Ser Gln Asn His Leu Arg Gln Ala Gln Val Thr Leu Ile Asp 325 330 335			1066
gct aca act tgc aat gaa cct caa gct tac aat gac gcc ata act cct Ala Thr Thr Cys Asn Glu Pro Gln Ala Tyr Asn Asp Ala Ile Thr Pro 340 345 350			1114
aga atg tta tgt gct ggc tcc tta gaa gga aaa aca gat gca tgc cag Arg Met Leu Cys Ala Gly Ser Leu Glu Gly Lys Thr Asp Ala Cys Gln 355 360 365			1162
ggt gac tct gga gga cca ctg gtt agt tca gat gct aga gat atc tgg Page 2			1210

227274078b.ST25.txt

Gly 370	Asp	Ser	Gly	Gly	Pro 375	Leu	Val	Ser	Ser	Asp 380	Ala	Arg	Asp	Ile	Trp 385	
tac	ctt	gct	gga	ata	gtg	agc	tgg	gga	gat	gaa	tgt	gcg	aaa	ccc	aac	1258
Tyr	Leu	Ala	Gly	Ile 390	Val	Ser	Trp	Gly	Asp 395	Glu	Cys	Ala	Lys	Pro	Asn 400	
aag	cct	ggt	gtt	tat	act	aga	gtt	acg	gcc	ttg	cgg	gac	tgg	att	act	1306
Lys	Pro	Gly	Val 405	Tyr	Thr	Arg	Val	Thr 410	Ala	Leu	Arg	Asp	Trp 415	Ile	Thr	
tca	aaa	act	ggt	atc	taa	gag	agaaaag	cct	cat	ggaa	cag	ata	acat			1354
Ser	Lys	Thr 420	Gly	Ile												
ttttttttgt	tttttggtg	tggaggccat	ttttagagat	acagaattgg	agaagacttg											1414
caaaacagct	agatttgact	gatctcaata	aactgtttgc	ttgatgcaaa	aaaaaaa											1471

<210> 2
 <211> 422
 <212> PRT
 <213> Homo sapiens

<400> 2

Met 1	Tyr	Arg	Pro	Asp 5	Val	Val	Arg	Ala	Arg 10	Lys	Arg	Val	Cys	Trp 15	Glu	
Pro	Trp	Val	Ile 20	Gly	Leu	Val	Ile	Phe 25	Ile	Ser	Leu	Ile	Val 30	Leu	Ala	
Val	Cys	Ile 35	Gly	Leu	Thr	Val	His 40	Tyr	Val	Arg	Tyr	Asn 45	Gln	Lys	Lys	
Thr 50	Tyr	Asn	Tyr	Tyr	Ser	Thr 55	Leu	Ser	Phe	Thr 60	Thr	Asp	Lys	Leu	Tyr	
Ala 65	Glu	Phe	Gly	Arg	Glu 70	Ala	Ser	Asn	Asn 75	Phe	Thr	Glu	Met	Ser	Gln 80	
Arg	Leu	Glu	Ser	Met 85	Val	Lys	Asn	Ala	Phe 90	Tyr	Lys	Ser	Pro	Leu 95	Arg	
Glu	Glu	Phe	Val 100	Lys	Ser	Gln	Val	Ile 105	Lys	Phe	Ser	Gln 110	Gln	Lys	His	
Gly	Val	Leu 115	Ala	His	Met	Leu	Leu 120	Ile	Cys	Arg	Phe	His 125	Ser	Thr	Glu	
Asp 130	Pro	Glu	Thr	Val	Asp	Lys 135	Ile	Val	Gln	Leu	Val 140	Leu	His	Glu	Lys	

227274078b.ST25.txt

Leu Gln Asp Ala Val Gly Pro Pro Lys Val Asp Pro His Ser Val Lys
 145 150 155 160

Ile Lys Lys Ile Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys
 165 170 175

Cys Gly Thr Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val
 180 185 190

Gly Gly Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu
 195 200 205

Gln Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr
 210 215 220

Trp Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro Ala
 225 230 235 240

Arg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys Met Lys
 245 250 255

Arg Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys His Pro Ser
 260 265 270

His Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser Pro Val Pro Tyr
 275 280 285

Thr Asn Ala Val His Arg Val Cys Leu Pro Asp Ala Ser Tyr Glu Phe
 290 295 300

Gln Pro Gly Asp Val Met Phe Val Thr Gly Phe Gly Ala Leu Lys Asn
 305 310 315 320

Asp Gly Tyr Ser Gln Asn His Leu Arg Gln Ala Gln Val Thr Leu Ile
 325 330 335

Asp Ala Thr Thr Cys Asn Glu Pro Gln Ala Tyr Asn Asp Ala Ile Thr
 340 345 350

Pro Arg Met Leu Cys Ala Gly Ser Leu Glu Gly Lys Thr Asp Ala Cys
 355 360 365

Gln Gly Asp Ser Gly Gly Pro Leu Val Ser Ser Asp Ala Arg Asp Ile
 370 375 380

Trp Tyr Leu Ala Gly Ile Val Ser Trp Gly Asp Glu Cys Ala Lys Pro
 385 390 395 400

227274078b.ST25.txt

Asn Lys Pro Gly Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile
405 410 415

Thr Ser Lys Thr Gly Ile
420

<210> 3
<211> 1471
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (56)..(1324)
<223>

<400> 3
tgacttggat gtagacctcg accttcacag gactcttcat tgctggttgg caatg atg 58
Met
1

tat cgg cca gat gtg gtg agg gct agg aaa aga gtt tgt tgg gaa ccc 106
Tyr Arg Pro Asp Val Val Arg Ala Arg Lys Arg Val Cys Trp Glu Pro
5 10 15

tgg gtt atc ggc ctc gtc atg ttc ata tcc ctg att gtc ctg gca gtg 154
Trp Val Ile Gly Leu Val Met Phe Ile Ser Leu Ile Val Leu Ala Val
20 25 30

tgc att gga gtc act gtt cat tat gtg aga tat aat caa aag aag acc 202
Cys Ile Gly Val Thr Val His Tyr Val Arg Tyr Asn Gln Lys Lys Thr
35 40 45

tac aat tac tat agc aca ttg tca ttt aca act gac aaa cta tat gct 250
Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr Thr Asp Lys Leu Tyr Ala
50 55 60 65

gag ttt ggc aga gag gct tct aac aat ttt aca gaa atg agc cag aga 298
Glu Phe Gly Arg Glu Ala Ser Asn Asn Phe Thr Glu Met Ser Gln Arg
70 75 80

ctt gaa tca atg gtg aaa aat gca ttt tat aaa tct cca tta agg gaa 346
Leu Glu Ser Met Val Lys Asn Ala Phe Tyr Lys Ser Pro Leu Arg Glu
85 90 95

gaa ttt gtc aag tct cag gtt atc aag ttc agt caa cag aag cat gga 394
Glu Phe Val Lys Ser Gln Val Ile Lys Phe Ser Gln Gln Lys His Gly
100 105 110

gtg ttg gct cat atg ctg ttg att tgt aga ttt cac tct act gag gat 442
Val Leu Ala His Met Leu Leu Ile Cys Arg Phe His Ser Thr Glu Asp
115 120 125

cct gaa act gta gat aaa att gtt caa ctt gtt tta cat gaa aag ctg 490
Pro Glu Thr Val Asp Lys Ile Val Gln Leu Val Leu His Glu Lys Leu
130 135 140 145

caa gat gct gta gga ccc cct aaa gta gat cct cac tca gtt aaa att 538
Gln Asp Ala Val Gly Pro Pro Lys Val Asp Pro His Ser Val Lys Ile
150 155 160

227274078b.ST25.txt

aaa Lys	aaa Lys	atc Ile	aac Asn 165	aag Lys	aca Thr	gaa Glu	aca Thr	gac Asp 170	agc Ser	tat Tyr	cta Leu	aac Asn	cat His 175	tgc Cys	tgc Cys	586
gga Gly	aca Thr	cga Arg 180	aga Arg	agt Ser	aaa Lys	act Thr	cta Leu 185	ggt Gly	cag Gln	agt Ser	ctc Leu	agg Arg 190	atc Ile	gtt Val	ggt Gly	634
ggg Gly	aca Thr 195	gaa Glu	gta Val	gaa Glu	gag Glu	ggt Gly 200	gaa Glu	tgg Trp	ccc Pro	tgg Trp	cag Gln 205	gct Ala	agc Ser	ctg Leu	cag Gln	682
tgg Trp 210	gat Asp	ggg Gly	agt Ser	cat His	cgc Arg 215	tgt Cys	gga Gly	gca Ala	acc Thr	tta Leu 220	att Ile	aat Asn	gcc Ala	aca Thr	tgg Trp 225	730
ctt Leu	gtg Val	agt Ser	gct Ala	gct Ala 230	cac His	tgt Cys	ttt Phe	aca Thr	aca Thr 235	tat Tyr	aag Lys	aac Asn	cct Pro	gcc Ala 240	aga Arg	778
tgg Trp	act Thr	gct Ala	tcc Ser 245	ttt Phe	gga Gly	gta Val	aca Thr	ata Ile 250	aaa Lys	cct Pro	tcg Ser	aaa Lys	atg Met 255	aaa Lys	cgg Arg	826
ggt Gly	ctc Leu	cgg Arg 260	aga Arg	ata Ile	att Ile	gtc Val	cat His 265	gaa Glu	aaa Lys	tac Tyr	aaa Lys	cac His 270	cca Pro	tca Ser	cat His	874
gac Asp	tat Tyr 275	gat Asp	att Ile	tct Ser	ctt Leu	gca Ala 280	gag Glu	ctt Leu	tct Ser	agc Ser	cct Pro 285	gtt Val	ccc Pro	tac Tyr	aca Thr	922
aat Asn 290	gca Ala	gta Val	cat His	aga Arg	gtt Val 295	tgt Cys	ctc Leu	cct Pro	gat Asp	gca Ala 300	tcc Ser	tat Tyr	gag Glu	ttt Phe	caa Gln 305	970
cca Pro	ggt Gly	gat Asp	gtg Val	atg Met 310	ttt Phe	gtg Val	aca Thr	gga Gly	ttt Phe 315	gga Gly	gca Ala	ctg Leu	aaa Lys	aat Asn 320	gat Asp	1018
ggt Gly	tac Tyr	agt Ser	caa Gln 325	aat Asn	cat His	ctt Leu	cga Arg	caa Gln 330	gca Ala	cag Gln	gtg Val	act Thr	ctc Leu 335	ata Ile	gac Asp	1066
gct Ala	aca Thr	act Thr 340	tgc Cys	aat Asn	gaa Glu	cct Pro	caa Gln 345	gct Ala	tac Tyr	aat Asn	gac Asp	gcc Ala 350	ata Ile	act Thr	cct Pro	1114
aga Arg	atg Met 355	tta Leu	tgt Cys	gct Ala	ggc Gly 360	tcc Ser	tta Leu	gaa Glu	gga Gly	aaa Lys	aca Thr 365	gat Asp	gca Ala	tgc Cys	cag Gln	1162
ggt Gly 370	gac Asp	tct Ser	gga Gly	gga Gly	cca Pro 375	ctg Leu	gtt Val	agt Ser	tca Ser	gat Asp 380	gct Ala	aga Arg	gat Asp	atc Ile	tgg Trp 385	1210
tac Tyr	ctt Leu	gct Ala	gga Gly	ata Ile 390	gtg Val	agc Ser	tcg Ser	gga Gly	gat Asp 395	gaa Glu	tgt Cys	gcg Ala	aaa Lys	ccc Pro 400	aac Asn	1258
aag Lys	cct Pro	ggt Gly	gtt Val	tat Tyr	act Thr	aga Arg	gtt Val	acg Thr	gcc Ala	ttg Leu	cgg Arg	gac Asp	tgg Trp	att Ile	act Thr	1306

405

410

415

tca aaa act ggt atc taa gagagaaaag cctcatggaa cagataacat 1354
 Ser Lys Thr Gly Ile
 420

ttttttttgt tttttgggtg tggaggccat ttttagagat acagaattgg agaagacttg 1414

caaaacagct agatttgact gatctcaata aactgtttgc ttgatgcaaa aaaaaaa 1471

<210> 4
 <211> 422
 <212> PRT
 <213> Homo sapiens

<400> 4

Met Tyr Arg Pro Asp Val Val Arg Ala Arg Lys Arg Val Cys Trp Glu
 1 5 10 15

Pro Trp Val Ile Gly Leu Val Met Phe Ile Ser Leu Ile Val Leu Ala
 20 25 30

Val Cys Ile Gly Val Thr Val His Tyr Val Arg Tyr Asn Gln Lys Lys
 35 40 45

Thr Tyr Asn Tyr Tyr Ser Thr Leu Ser Phe Thr Thr Asp Lys Leu Tyr
 50 55 60

Ala Glu Phe Gly Arg Glu Ala Ser Asn Asn Phe Thr Glu Met Ser Gln
 65 70 75 80

Arg Leu Glu Ser Met Val Lys Asn Ala Phe Tyr Lys Ser Pro Leu Arg
 85 90 95

Glu Glu Phe Val Lys Ser Gln Val Ile Lys Phe Ser Gln Gln Lys His
 100 105 110

Gly Val Leu Ala His Met Leu Leu Ile Cys Arg Phe His Ser Thr Glu
 115 120 125

Asp Pro Glu Thr Val Asp Lys Ile Val Gln Leu Val Leu His Glu Lys
 130 135 140

Leu Gln Asp Ala Val Gly Pro Pro Lys Val Asp Pro His Ser Val Lys
 145 150 155 160

Ile Lys Lys Ile Asn Lys Thr Glu Thr Asp Ser Tyr Leu Asn His Cys
 165 170 175

Cys Gly Thr Arg Arg Ser Lys Thr Leu Gly Gln Ser Leu Arg Ile Val
 Page 7

180

185

190

Gly Gly Thr Glu Val Glu Glu Gly Glu Trp Pro Trp Gln Ala Ser Leu
 195 200 205

Gln Trp Asp Gly Ser His Arg Cys Gly Ala Thr Leu Ile Asn Ala Thr
 210 215 220

Trp Leu Val Ser Ala Ala His Cys Phe Thr Thr Tyr Lys Asn Pro Ala
 225 230 235 240

Arg Trp Thr Ala Ser Phe Gly Val Thr Ile Lys Pro Ser Lys Met Lys
 245 250 255

Arg Gly Leu Arg Arg Ile Ile Val His Glu Lys Tyr Lys His Pro Ser
 260 265 270

His Asp Tyr Asp Ile Ser Leu Ala Glu Leu Ser Ser Pro Val Pro Tyr
 275 280 285

Thr Asn Ala Val His Arg Val Cys Leu Pro Asp Ala Ser Tyr Glu Phe
 290 295 300

Gln Pro Gly Asp Val Met Phe Val Thr Gly Phe Gly Ala Leu Lys Asn
 305 310 315 320

Asp Gly Tyr Ser Gln Asn His Leu Arg Gln Ala Gln Val Thr Leu Ile
 325 330 335

Asp Ala Thr Thr Cys Asn Glu Pro Gln Ala Tyr Asn Asp Ala Ile Thr
 340 345 350

Pro Arg Met Leu Cys Ala Gly Ser Leu Glu Gly Lys Thr Asp Ala Cys
 355 360 365

Gln Gly Asp Ser Gly Gly Pro Leu Val Ser Ser Asp Ala Arg Asp Ile
 370 375 380

Trp Tyr Leu Ala Gly Ile Val Ser Ser Gly Asp Glu Cys Ala Lys Pro
 385 390 395 400

Asn Lys Pro Gly Val Tyr Thr Arg Val Thr Ala Leu Arg Asp Trp Ile
 405 410 415

Thr Ser Lys Thr Gly Ile
 420

<210> 5
 <211> 28
 <212> DNA
 <213> Homo sapiens

<400> 5
 tgcatcaagc aaacagttta ttgagatc

28

<210> 6
 <211> 25
 <212> DNA
 <213> Homo sapiens

<400> 6
 cctgttcct acacaaathc agtac

25

<210> 7
 <211> 28
 <212> DNA
 <213> Homo sapiens

<400> 7
 tgacttggat gtagacctcg accttcac

28

<210> 8
 <211> 22
 <212> DNA
 <213> Homo sapiens

<400> 8
 ggaatagtga gctcgggaga tg

22

<210> 9
 <211> 28
 <212> DNA
 <213> Homo sapiens

<400> 9
 tcactgttca ttatgtgaga tataatca

28

<210> 10
 <211> 27
 <212> DNA
 <213> Homo sapiens

<400> 10
 caccattgat tcaagtctct ggctcat

27

<210> 11
 <211> 17
 <212> DNA
 <213> Homo sapiens

<400> 11
 gtaatgacca gtcaaca

17

227274078b.ST25.txt

<210> 12
<211> 24
<212> DNA
<213> Homo sapiens

<400> 12
ccagcaagct tgcgaccttg acca

24

<210> 13
<211> 11
<212> PRT
<213> Artificial sequence

<220>
<223> Substrate for DESC1 protease.

<400> 13

Pro Leu Ser Arg Thr Leu Ser Val Ala Ala Lys
1 5 10